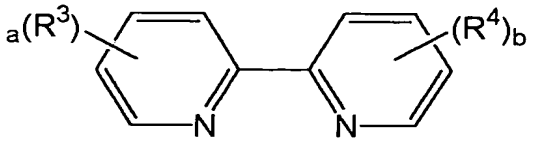
ABSTRACT

There is provided a method for producing a coupling compound of formula (1): $(Y-)_{(n-1)}R^1-R^2-(R^1)_{(n'-1)}$ (1) wherein R^1, R^2 n and n' are as defined below, Y is R^2 or X as defined below, which method comprises reacting an organic halogen compound of formula (2): $n'(R^1X^1_n)$ (2) wherein X^1 represents a bromine or iodine, R^1 represents a substituted or unsubstituted, linear, branched or cyclic hydrocarbon group of which α and β carbon atoms in relation to X^1 are sp3 carbon atoms, n and n' each independently represent an integer of 1 or 2, and provided that n and n' do not simultaneously represent 2, with an organic boron compound of formula (3): $m\{R^2(BX^2_2)_{n'}\}$ (3) wherein R^2 represents a substituted or unsubstituted aryl group or a substituted or unsubstituted alkenyl group and the boron atom is bonded with a sp2 carbon atom thereof, X^2 represents a hydroxyl or alkoxy group, n' is as defined above, m represents an integer of 1 or 2, and m is not more than n, in the presence of a catalyst comprising a) a nickel compound, and

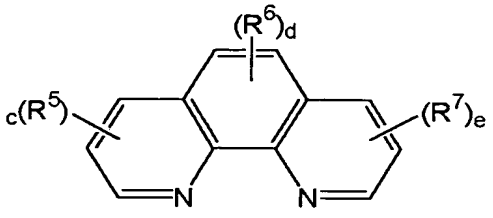
b) b-1) a compound of formula (i):



(i)

, or

b-2) a compound of formula (ii):



(ii)